

The JANUARY Final WSF sets BiOp actions as defined in table below where highlighted.
Other projects provided for informational purposes only.

Forecast Point	Forecast period	Forecast	BiOp Actions to be Determined
Hungry Horse	April – August Provided by Reclamation	January, February, March Final	Sets min. flows at Hungry Horse and Columbia Falls
	May – September Provided by Reclamation	January, February, March Final	Sets VARQ FRM targets
		April Final	Sets VARQ FRM targets and VARQ refill flows
		May, June Final	Sets VARQ refill flows
The Dalles	April – September Provided by NWRFC	March Final	Sets CRWMP adjustments at Grand Coulee
	April – August Provided by NWRFC	April Final	Sets spring flow objective at McNary Dam
		May Final	Sets end of September draft limits at Hungry Horse and Libby
		July Final	Sets end of August draft limit at Grand Coulee
Lower Granite	April – July Provided by NWRFC	April Final	Sets spring flow objective at Lower Granite
		June Final	Sets summer flow objective at Lower Granite
Libby	April – August Provided by Corps Seattle District	December Final	Sets end of December variable draft target
		January, February, March Final	Sets VARQ FRM targets
		April Final	Sets VARQ FRM targets and VARQ refill flows
		May Final	Sets Libby min. sturgeon flow volume and min. bull trout flows for after sturgeon pulse through Sept. Sets VARQ FRM targets and VARQ refill flows
		June Final	VARQ refill flows
Dworshak	April – July Provided by Corps Walla Walla District	January to June Final	Manage for reservoir FRM and refill

January 5, 2016

Hungry Horse Dam – Official Water Supply Forecast

Here are the volumes for the January final forecast for Hungry Horse inflow:

Jan-Jul: 2,019 kaf (96%)

Apr-Aug: 1,858 kaf (96%)

May-Sep: 1,625 kaf (96%)

The minimum flows downstream of Hungry Horse are as follows:

Columbia Falls: 3,500 cfs

Hungry Horse: 900 cfs

Mary Mellema

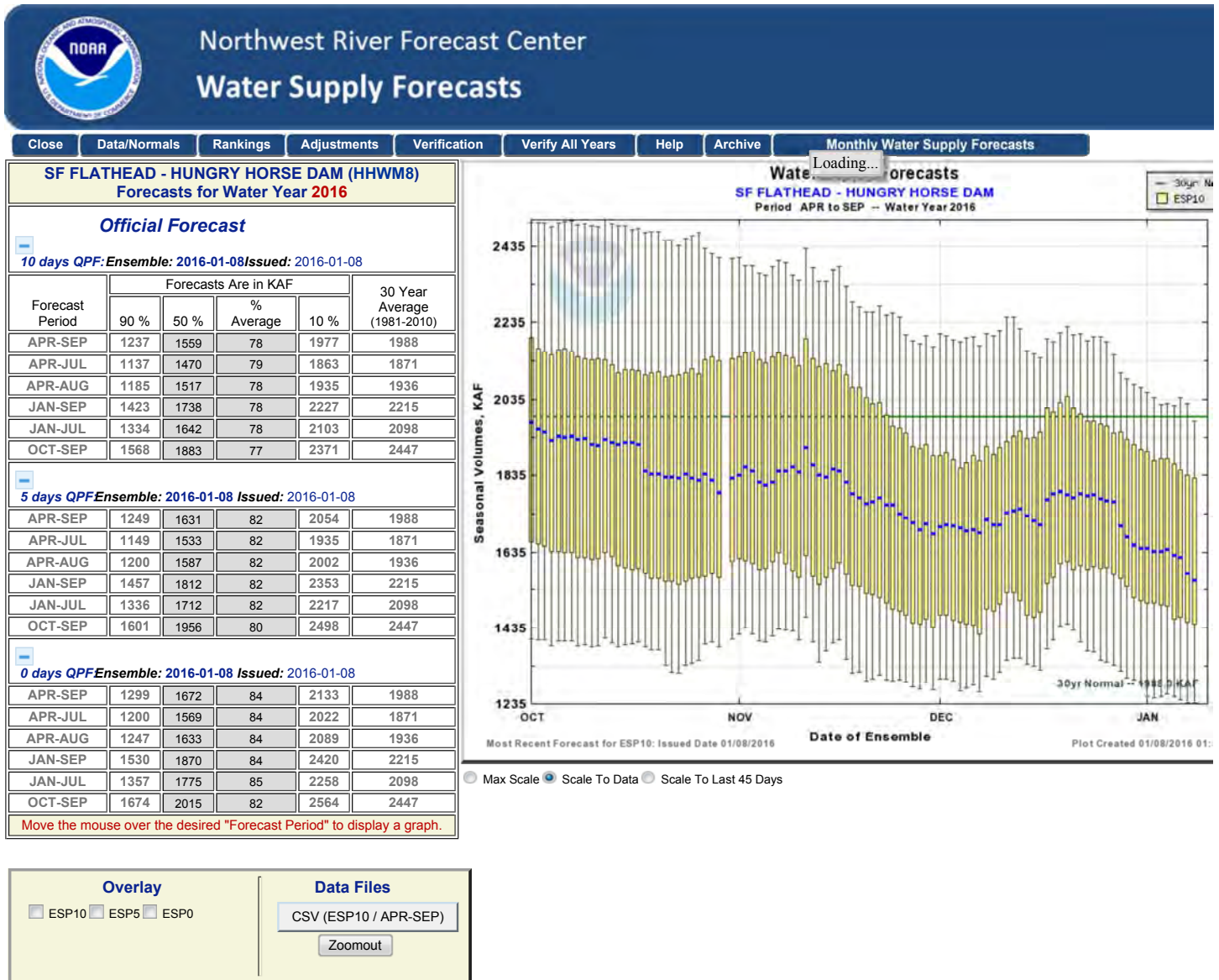
River and Reservoir Operations

U.S. Bureau of Reclamation

PN Regional Office

Boise, ID 83706

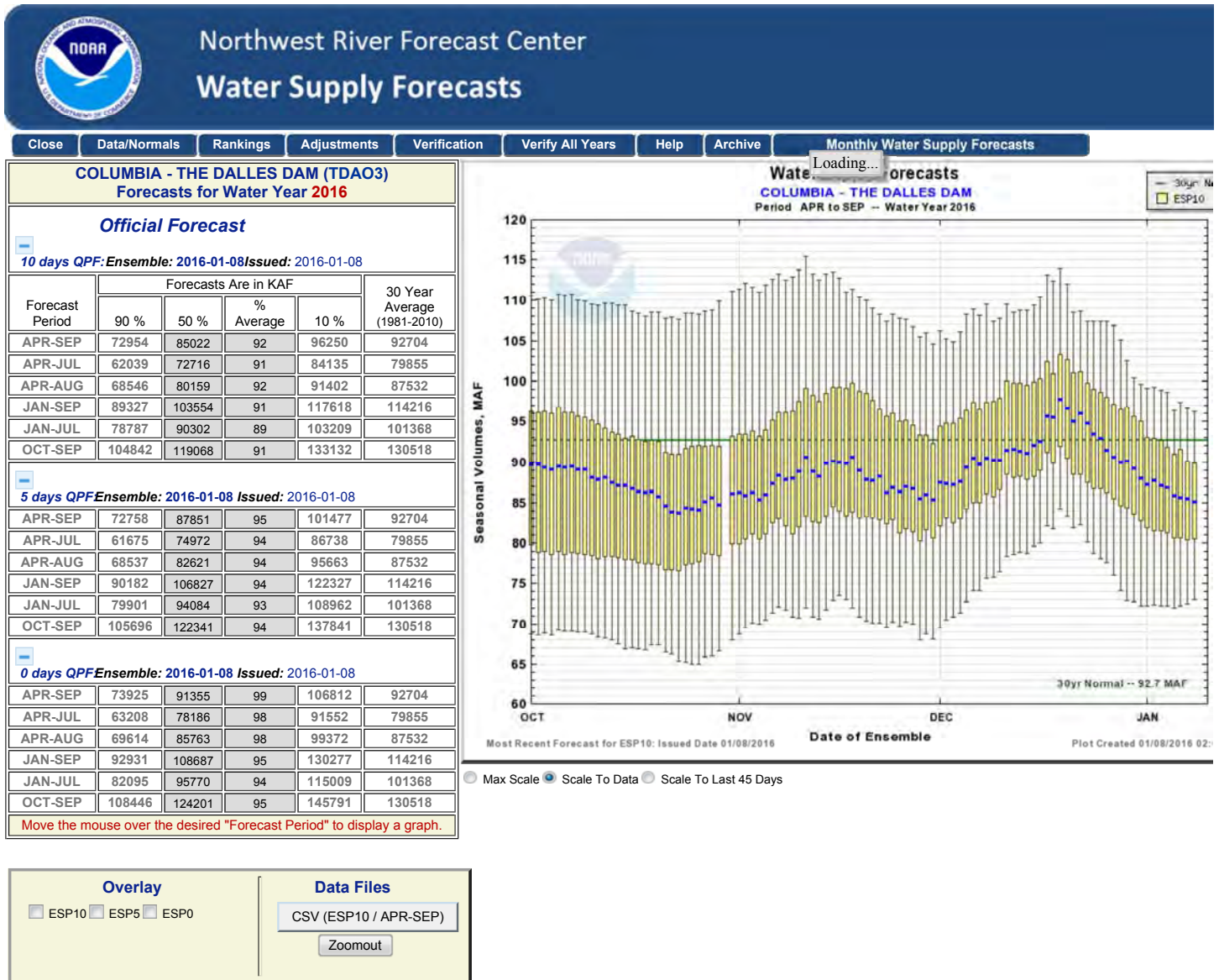
Official WSF for Hungry Horse Dam computed by the Bureau of Reclamation (see previous page).
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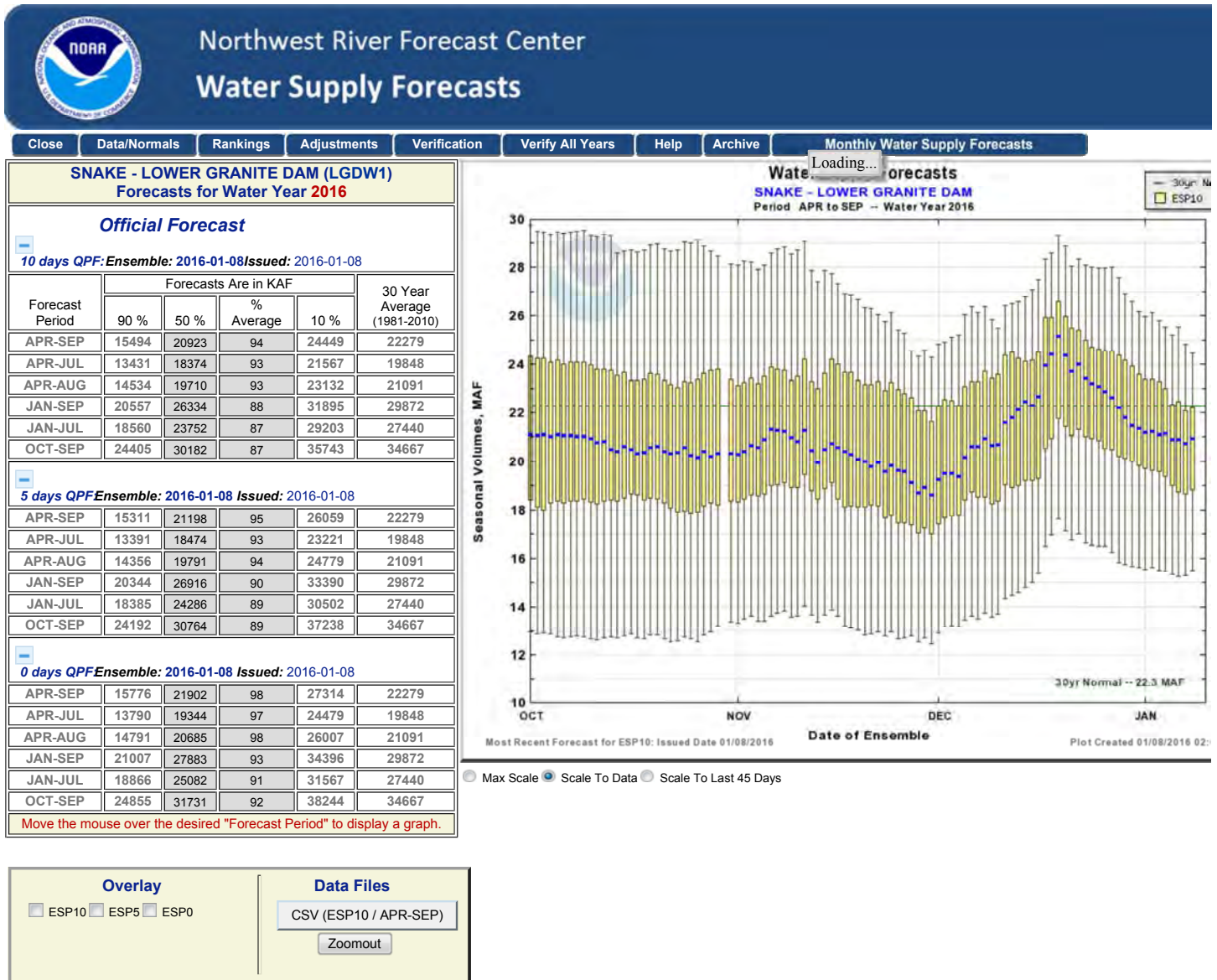
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The Dalles Dam JANUARY WSF is not used for implementation of BiOp actions.
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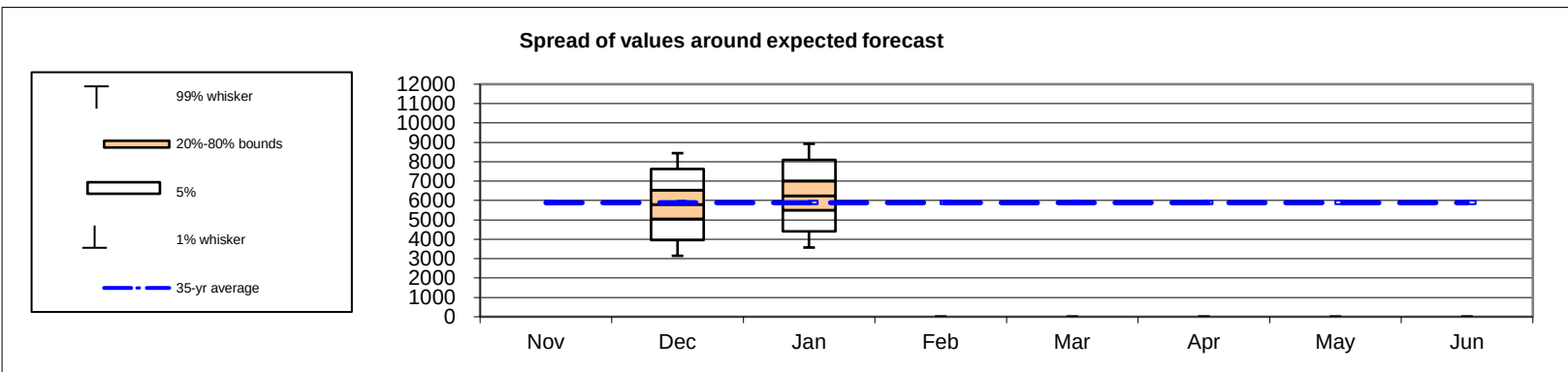
Lower Granite Dam JANUARY WSF is not used for implementation of BiOp actions.
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Libby : January Runoff Forecast & Flood Risk Management Calculation

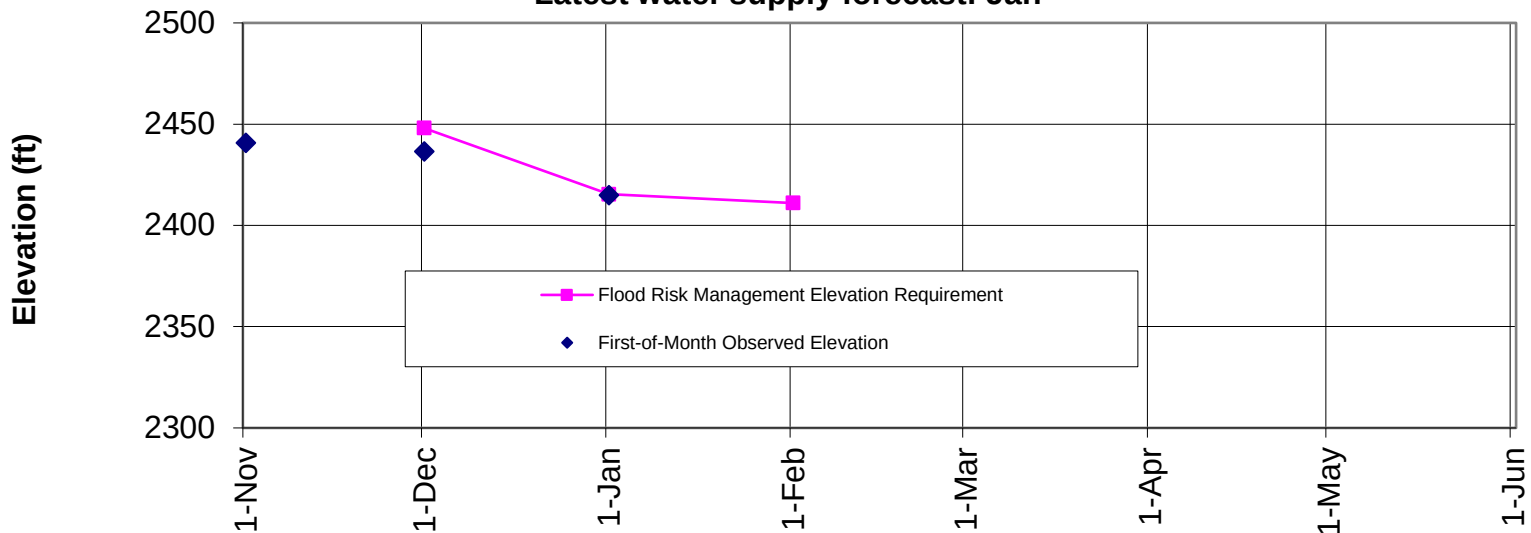
WY 2016

Runoff Forecast and Flood Risk Management				1981-2010 Average	Percent of Average	1929-2008 Average	Percent of Average								
Most Probable Runoff Volume:	Apr-Aug	6249	KAF	5885	106%	6282	99%								
	Apr-Jul	5673	KAF	5342	106%	5720	99%								
	May-Jul	5119	KAF	4821	106%	5199	98%								
31-Jan Flood Risk Management Space		1999	KAF												
31-Jan Flood Risk Management Elevation		2411.0	ft												
Seasonal Flood Risk Management								VARQ Flood Risk Management Implemented							
Forecast Date >>		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun						
Apr-Aug Runoff Forecast			5793	6249											
First-of-Month Elev		2440.7	2436.5	2415.0											
Date >>		30-Nov	31-Dec	31-Jan	28-Feb	15-Mar	31-Mar	15-Apr	30-Apr						
Flood Risk Management Space		500	1840	1999											
Flood Risk Management Elevation		2448.0	2415.3	2411.0											



Libby Flood Risk Management Elevations - 2016

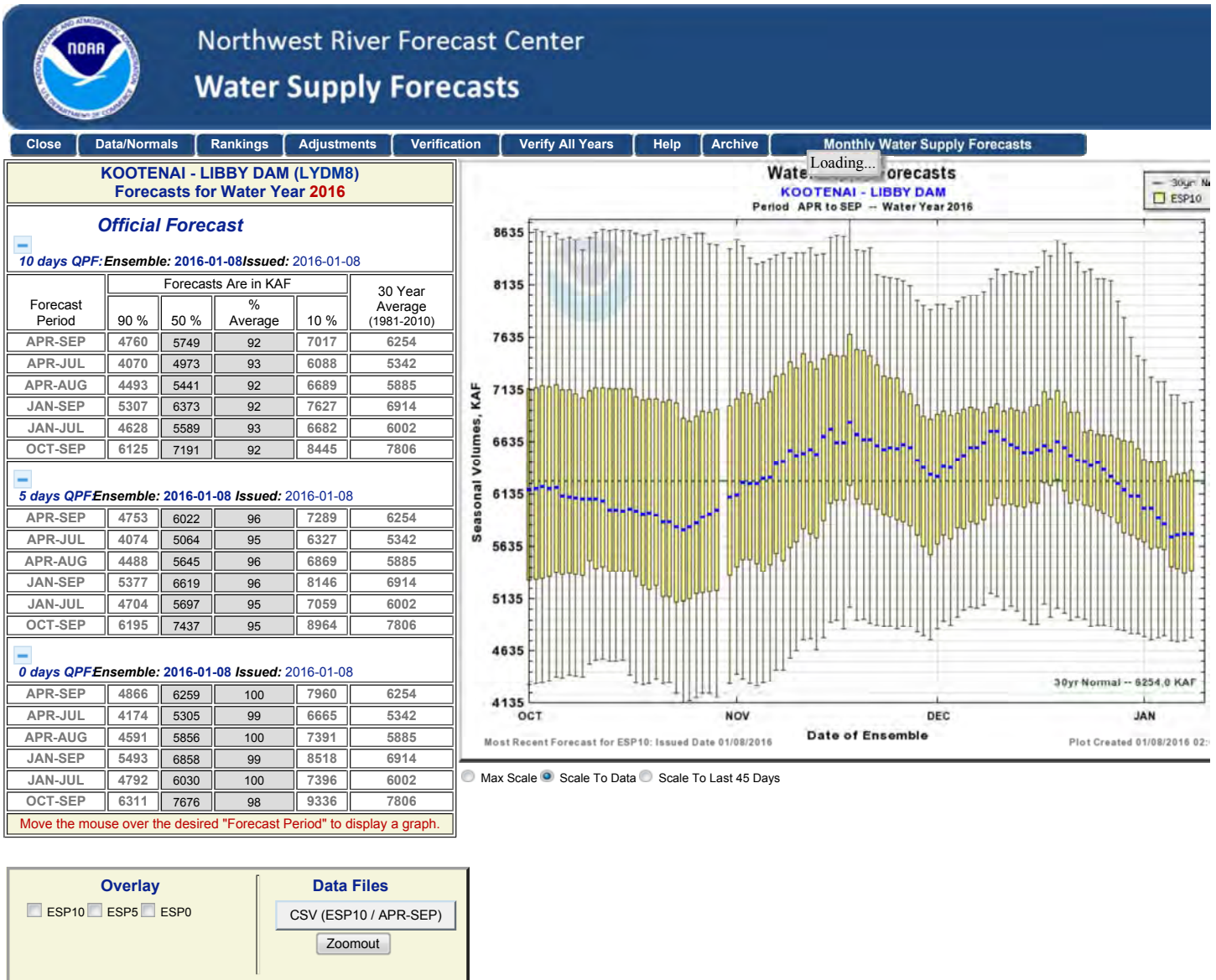
Latest water supply forecast: Jan



Notes:

1. The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Joel Fenolio (206) 764-6683, Kevin Shaffer (206) 764-3660, Logan Osgood-Jacobs (206) 764-6928, or Kristian Mickelson (206) 764-6927.
2. If a prior month's forecast as published in this document is different than what was originally published in the issue month, then the earlier forecast has been adjusted to reflect updated values for precipitation or streamflow.

Official WSF for Libby Dam computed by the Corps Seattle District (see previous page).
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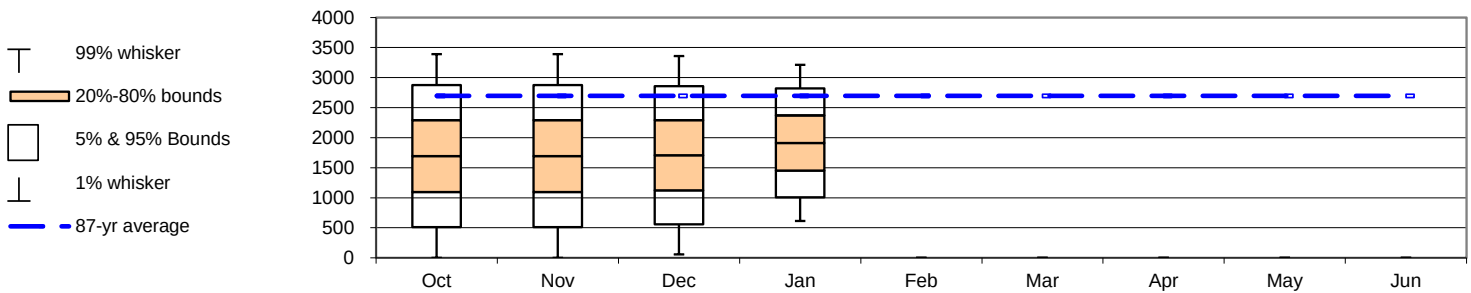


Dworshak : January Runoff Forecast & Flood Risk Management Calculation

WY 2016

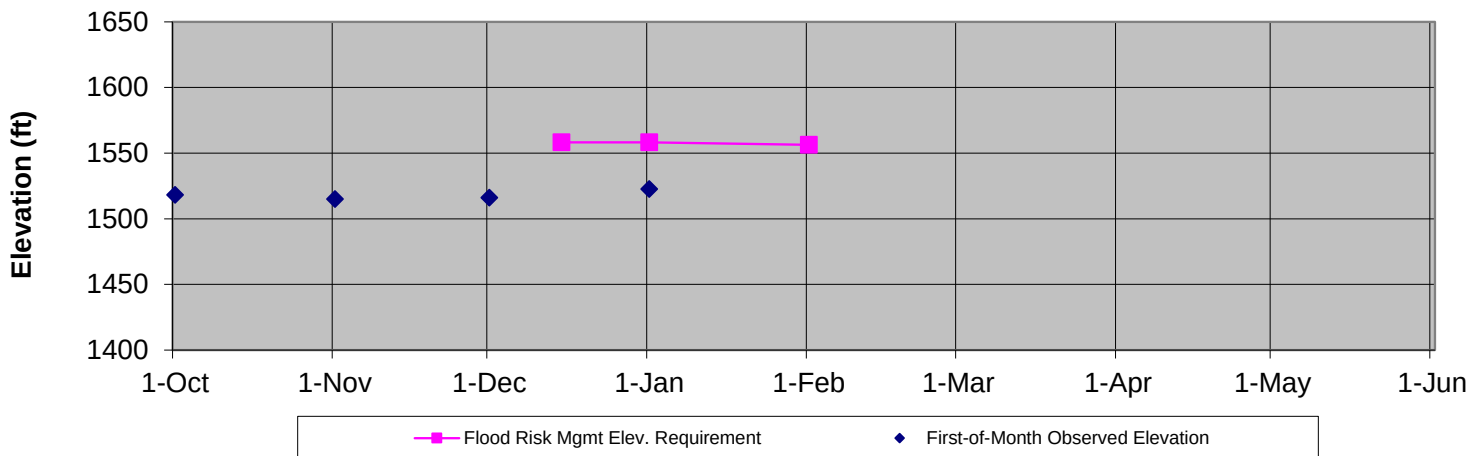
Runoff Forecast and Flood Risk Management (FRM)						1981-2010 Average	Percent of 30yr Average	1929-2008 Average	Percent of Average
Most Probable Runoff Volume		Apr-Jul	1913	KAF		2418	79%	2696	71%
		May-Jul	1340	KAF		1771	76%	1972	68%
31-Jan Flood Risk Management Space				727	KAF				
31-Jan Flood Risk Management Elevation				1556.4	ft				
Seasonal Flood Risk Management (assumes no shift of flood risk management space to Grand Coulee)									
Forecast Date>>	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Jul Runoff Forecast	1676	1676	1708	1913					
First-of-Month Elev	1518.2	1515.0	1516.1	1522.7					
Date >>		15-Dec	31-Dec	31-Jan	28-Feb	31-Mar	15-Apr	30-Apr	
FRM Space	--	700	700	727					
FRM Elevation	--	1558.2	1558.2	1556.4					

Spread of values around expected forecast

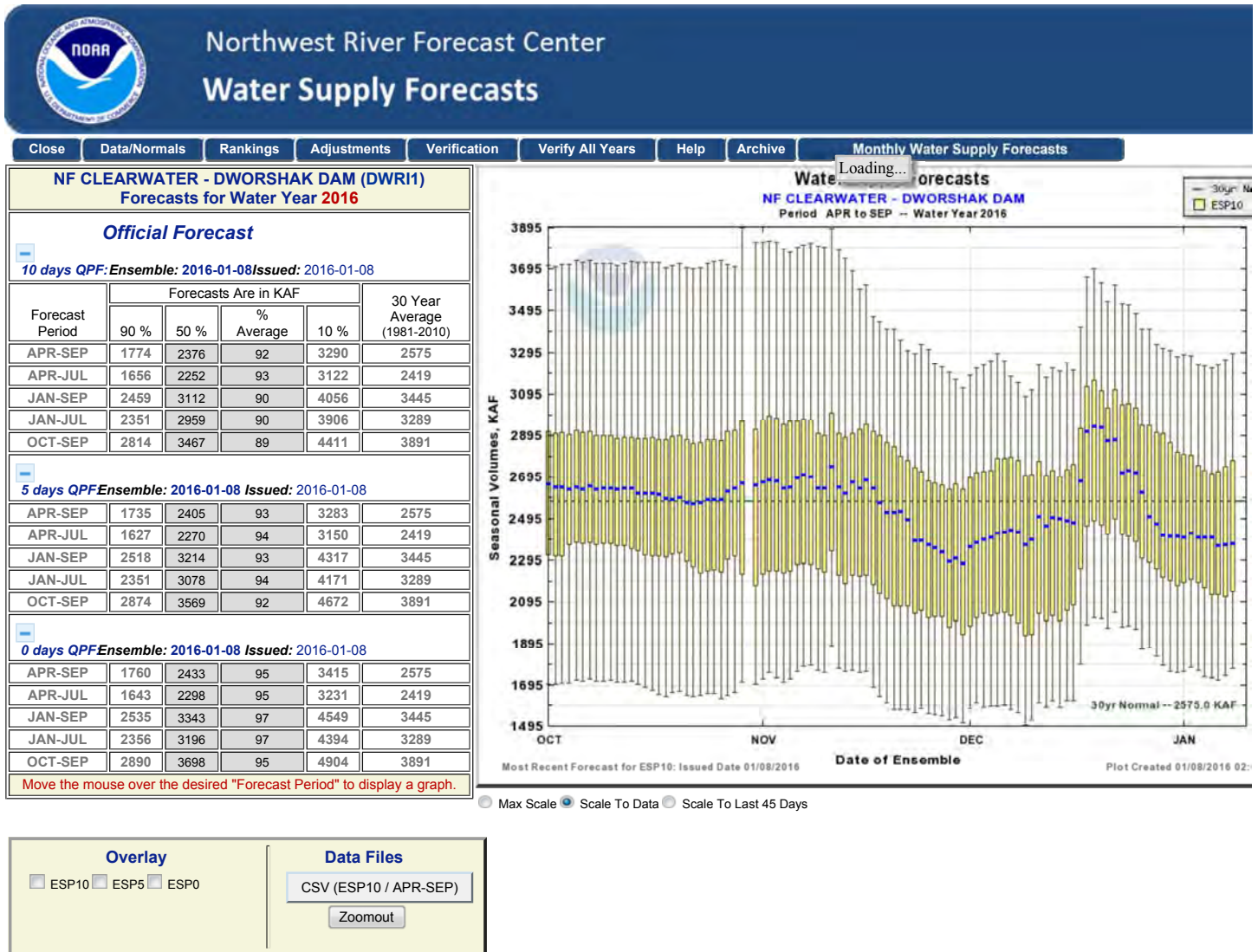


Dworshak Flood Risk Management Elevations - 2016

Latest water supply forecast: Jan



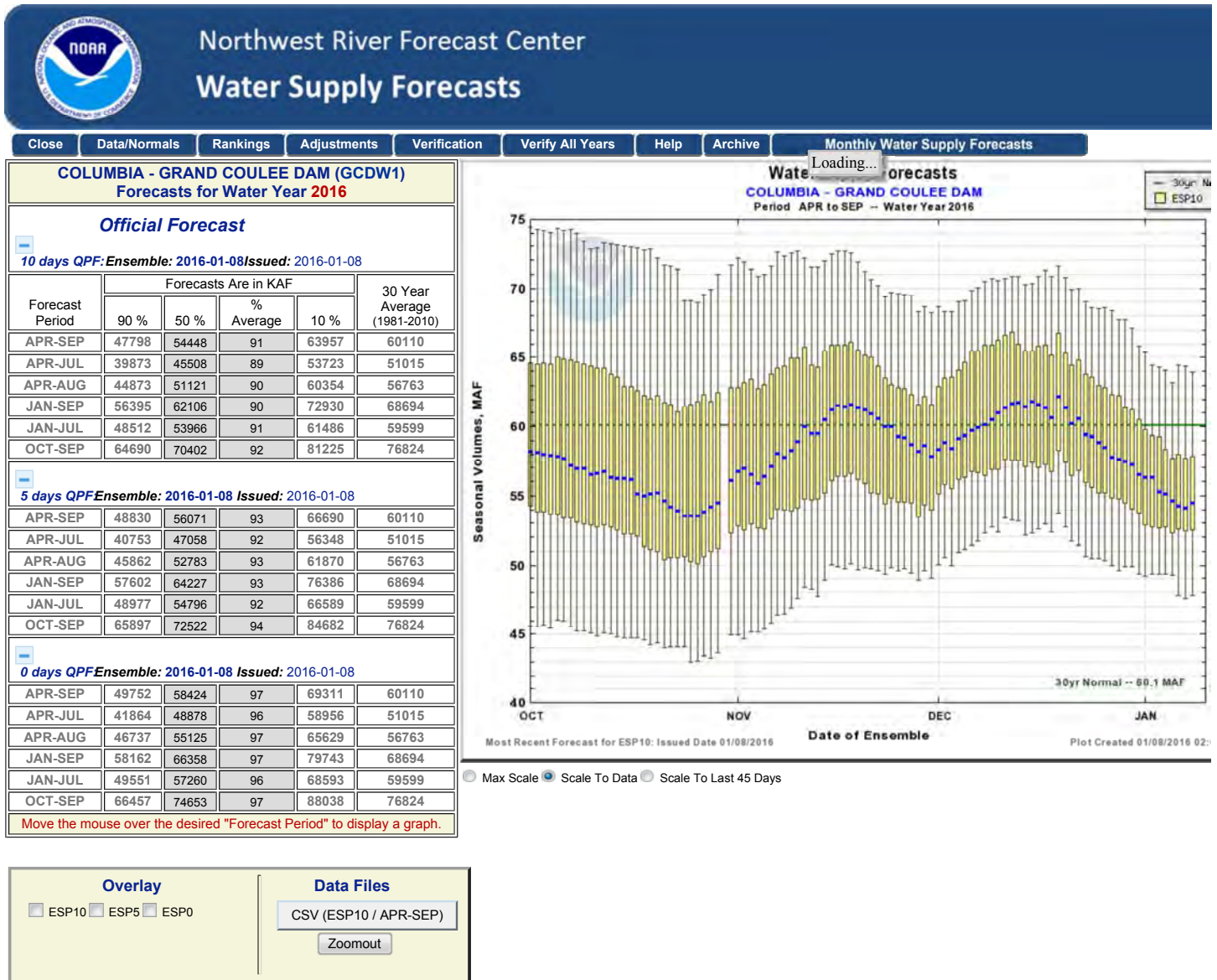
Official WSF for Dworshak Dam computed by the Corps Walla Walla District (see previous page).
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Grand Coulee Dam forecasts are not used for implementation of BiOp actions.
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Albeni Falls Dam forecasts are not used for implementation of BiOp actions.
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